

What is claimed is:

1. A low density slurry bridge mix comprising:

zirconium metal;

a thermal conductivity enhancer;

potassium perchlorate oxidant; and

a binder material;

wherein the low density slurry bridge mix has a dry density of about 45% to about 65% of theoretical density.
2. The low density slurry bridge mix of claim 1 wherein the thermal conductivity enhancer comprises a metal selected from the group consisting of aluminum, magnesium, tungsten, and combinations thereof.
3. The low density slurry bridge mix of claim 1 wherein the thermal conductivity enhancer comprises a metal oxide selected from the group consisting of cupric oxide, gold, silver and palladium oxides, and combinations thereof.
4. The low density slurry bridge mix of claim 1 wherein the thermal conductivity enhancer comprises aluminum metal.

5. The low density slurry bridge mix of claim 1 having adhesive properties effective to adhere the low density slurry bridge mix to an associated bridgewire.

6. The low density slurry bridge mix of claim 1 wherein the binder material comprises an acrylic binder.

7. The low density slurry bridge mix of claim 1 comprising:
about 25 to about 35 composition weight percent zirconium metal;
about 10 to about 20 composition weight percent aluminum metal
thermal conductivity enhancer;
about 48 to about 65 composition weight percent potassium perchlorate
oxidant; and
about 1.5 to about 5 composition weight percent acrylic binder.

8. The low density slurry bridge mix of claim 1 further comprising a metal oxide supplemental oxidant.

9. The low density slurry bridge mix of claim 8 wherein the metal oxide supplemental oxidant is selected from the group consisting of cupric oxide, gold, silver, platinum, and palladium oxides, and combinations thereof.

10. The low density slurry bridge mix of claim 8 wherein the metal oxide supplement oxidant comprises cupric oxide.

11. The low density slurry bridge mix of claim 8 comprising about 10 to about 20 composition weight percent metal oxide supplemental oxidant.

12. An electrical initiator comprising:
a raised bridgewire; and
the low density slurry bridge mix of claim 1,
wherein the low density slurry bridge mix is adhered to the raised
bridgewire.

13. The electrical initiator of claim 12 wherein the raised bridgewire is encased in and adhesively bonded to the low density slurry bridge mix.

14. The electrical initiator of claim 12 wherein the thermal conductivity enhancer comprises aluminum metal.

15. The electrical initiator of claim 12 wherein the low density slurry bridge mix comprises:

about 25 to about 35 composition weight percent zirconium metal;

about 10 to about 20 composition weight percent aluminum metal thermal conductivity enhancer;

about 48 to about 65 composition weight percent potassium perchlorate oxidant; and

about 1.5 to about 5 composition weight percent acrylic binder.

16. The electrical initiator of claim 12 wherein the low density slurry bridge mix further comprises a metal oxide supplement oxidant.

17. The electrical initiator of claim 16 wherein the metal oxide supplemental oxidant is selected from the group consisting of cupric oxide, gold, silver, platinum and palladium oxides, and combinations thereof.

18. The electrical initiator of claim 17 wherein the metal oxide supplemental oxidant comprises cupric oxide.

19. The electrical initiator of claim 16 wherein the low density slurry bridge mix comprises about 10 to about 20 composition weight percent metal oxide supplemental oxidant.

20. The electrical initiator of claim 12 further comprising an unground header.

21. The electrical initiator of claim 20 wherein the low density slurry bridge mix has adhesive properties effective to adhere the low density slurry bridge mix to the unground header.

22. A low density slurry bridge mix having adhesive properties effective to adhere the low density slurry bridge mix to an associated bridgewire comprising:

about 25 to about 35 composition weight percent zirconium metal;

about 10 to about 20 composition weight percent aluminum metal thermal conductivity enhancer;

about 48 to about 65 composition weight percent potassium perchlorate oxidant;

about 10 to about 20 composition weight percent metal oxide supplemental oxidant; and

about 1.5 to about 5 composition weight percent acrylic binder,
wherein the low density slurry bridge mix has a dry density of about
45% to about 60% of theoretical density.

23. The low density slurry bridge mix of claim 22 wherein the metal
oxide supplemental oxidant comprises cupric oxide.